# Abstract

Evidence suggests that functional social support (FSS) may promote memory through stress-buffering mechanisms, although the role of marital status in shaping this association remains underexplored. FSS from a spouse, apart from FSS from other providers, may foster more effective coping efforts and reduce stress during physical and mental hardships, thereby providing added protection against memory decline. However, a recent quantitative study by the authors found that marital status did not modify the association between FSS and memory. To better understand and contextualize this finding, we undertook a qualitative descriptive study to explore the perspectives of middle-aged and older adults on the extent to which marital status influences the FSS-memory relationship. Semi-structured interviews were conducted with 18 purposively-sampled community-dwelling adults representing various marital status categories. Each interview was audio-recorded, transcribed verbatim, and thematically analyzed. Three major themes emerged to explain why marital status may not impact the FSS-memory relationship: “learning to cope” – participants used alternatives besides a spouse to deal with memory challenges; “context matters” – contextual factors such as marital satisfaction must be considered to provide a deeper understanding of this relationship; and “doing more harm than good” – some spouses may provide excessive support, reducing participants’ autonomy to stimulate their cognitive processes. These themes highlight that marital relationships are complex, and contextual factors such as marital quality and support adequacy should be considered to provide a comprehensive understanding of how social and marital dynamics impact cognitive trajectories in aging populations.

**Keywords:** Social relationships, marriage, marital dissolution, cognitive function, social engagement

# Introduction

Memory, one of the six domains of cognitive function (Sachdev et al., 2014), is the capacity to encode, store, and retrieve information (Craik & Rose, 2012). Changes in the memory domain of cognitive function are commonly linked to the aging process and can substantially interfere with one’s ability to carry out both basic and instrumental activities of daily living (e.g., dressing, bathing, or preparing meals). Declines in memory may also serve as early markers of neurocognitive disorders such as Alzheimer’s disease (Tuokko et al., 2017). Therefore, investigating modifiable risk or protective factors for memory decline is important to help offset future health challenges in aging populations. One such modifiable factor is functional social support (FSS).

FSS is the perception that members of one’s social network will be available to provide help and assistance when needed (Gow et al., 2013); this can take many forms, including access to emotional or affectionate support, availability of advice when making life choices, or simply having someone to engage in leisure activities. FSS has been associated with higher levels of cognitive function, specifically memory, in various cross-sectional and longitudinal studies (Ge et al., 2017; Gow et al., 2013; Krueger et al., 2009; Yoo et al., 2023).

Several interconnected frameworks have been proposed to explain the relationship between FSS and memory, with the stress-buffering hypothesis being one of the most prominent. The stress-buffering hypothesis posits that FSS can mitigate the detrimental effects of stressful life events on an individual’s health by providing a sense of stability, positive affect, and self-worth (Cohen & Wills, 1985). High-quality support may also help individuals reframe stressful situations as less serious and potentially solvable. Such outlets may counteract the physiological changes associated with stress, such as elevated blood cortisol levels, which have been shown to negatively affect the areas of the brain that are responsible for memory (e.g., the hippocampus) (Kuiper et al., 2016). However, while the link between FSS and memory has been well established in the literature, the role of marital status in shaping this association remains underexplored.

Marriage is a key source of FSS among middle-aged and older adults, especially as health declines (Penning & Wu, 2014). Research has consistently shown that individuals who are married or in common-law relationships tend to report better physical and psychological health than their unmarried counterparts (Grundström et al., 2021; Robles, 2014). More specifically, marital status has been associated with differences in memory, with married people consistently reporting better memory performance than single or widowed individuals (Aartsen et al., 2005; Liu et al., 2019; Mousavi-Nasab et al., 2012).

Several mechanisms have been proposed to explain the cognitive benefits of marriage or common-law relationships. Spouses often serve as primary sources of emotional and instrumental support, providing encouragement, affection, financial help, physical assistance, and stress alleviation (Penning & Wu, 2014; Shapiro & Keyes, 2008)—all key components of FSS. In addition, spouses frequently promote healthier lifestyles and greater social engagement, which are both protective factors for cognitive health (Gow et al., 2013; Hülür, 2022; Shapiro & Keyes, 2008; Wyke & Ford, 1992). Therefore, given the central role of FSS in these dynamics, the association between FSS and memory may differ depending on one’s marital status. More specifically, while FSS promotes better memory through stress-buffering mechanisms (Cohen & Wills, 1985), FSS from a spouse (in addition to FSS from other support providers) can generate a greater sense of reassurance, foster more effective coping efforts, and reduce stress during times of physical or mental adversity. This enhanced support may amplify the cognitive benefits of FSS, particularly in buffering against memory decline. Investigating marital status as an effect modifier is therefore essential to deepening our understanding of the complex interplay between social engagement, relationship context, and cognitive aging.

Despite the theoretical rationale for marital status as an effect modifier of the association between FSS and memory, this relationship has been understudied in the literature. A recent systematic review by Haghighi and Oremus (2023) identified only four articles that examined marital-related variables alongside FSS and memory (Liao & Scholes, 2017; Scholes & Liao, 2022; Windsor et al., 2014; Zahodne et al., 2019). Results across these studies were equivocal with most of the articles reporting positive, though statistically non-significant, associations between spousal support and memory. However, in these articles, the source of FSS (i.e., support from spouses versus support from children, family members, or friends), rather than marital status specifically, was used as an effect modifier of the association between FSS and memory. To fill this gap in the literature, we previously investigated the impact of marital status on the association between FSS and memory using a sample of 10,318 middle-aged and older, community-dwelling adults from the Canadian Longitudinal Study on Aging (CLSA) (Raina et al., 2019). We found a positive association between FSS and memory, but it was not modified by marital status (Haghighi et al., 2025).

While this quantitative study suggested some support for the stress-buffering hypothesis linking FSS and memory, the lack of a moderating effect of marital status seemed inconsistent with a priori expectations and theoretical rationale. Therefore, we conducted qualitative interviews with a sample of middle-aged and older adults, whose age characteristics reflected the characteristics of persons in the quantitative study, to better understand the nuances between FSS, memory, and marital relationships. Given the dearth of qualitative research on whether marital status affects the association between FSS and memory, we investigated whether the real-life experiences of key informants could help in interpreting and contextualizing the earlier quantitative findings to provide a more expansive understanding of an understudied area.

# Methods

## 2.1 Study design

One-on-one, semi-structured interviews were conducted with 18 community-dwelling adults between the ages of 45 and 85 years. We recruited these individuals via purposive sampling to reflect the age characteristics of the CLSA participants used in our previous quantitative study (Haghighi et al., 2025). The qualitative participants had to be fluent in English and be free of overt signs of cognitive impairment, including difficulty following a conversation, understanding the nature of the interview, providing basic demographic information, or following instructions.

Purposive sampling included snowball sampling, posters, social media posts and advertisements. We distributed study materials to various organizations across Ontario, such as public libraries, pharmacies, older adult day programs, faculty newsletters, and the union representing the University of Waterloo’s physical plant workers. Advertisements were also displayed in Coffee News magazine (Coffee News, 2025). Interested individuals were asked to contact the first author by phone or email if they wished to participate.

After informed consent was obtained, the first author scheduled a mutually convenient time to conduct the interview. All interviews took place on the Zoom video-conferencing platform (v6.1.11, Zoom Video Communications, San Jose, CA) and ranged from 20 to 60 minutes. Participant recruitment continued until at least one or two participants were represented from each marital status category and the data reached thematic saturation, which occurred when further interviews did not yield any new codes or themes about the topic under investigation (Saunders et al., 2018). Ethics approval for the current study was obtained from the University of Waterloo’s Office of Research Ethics (file # 45801).

## 2.2 Interview process

We began each interview by asking participants about the types and sources of social support they receive. Participants were also asked to rate their satisfaction with their current marital status and their day-to-day memory function on a scale of 1 to 10, with 10 indicating excellent marital satisfaction or memory performance. The first author served as the interviewer and probed with follow-up questions when necessary. The interviews followed a semi-structured guide (Appendix A) that was developed after completion of the quantitative study.

## 2.3 Qualitative analyses

Each interview was audio-recorded and transcribed verbatim using the Zoom platform’s built-in tools. After transcription, the interviewer checked each interview for accuracy by re-listening to the audio recordings and cross-referencing them with the written transcripts. Pseudonyms were used in all interview transcripts to protect the privacy of participants. The transcripts were imported into NVivo software (v15.1.0, Lumivero, Denver, CO) and organized by question. A single coder used reflexive thematic analysis (Braun & Clarke, 2006, 2019) to identify recurrent and overarching themes about the extent to which marital status might influence the association between FSS and memory. The coder developed themes through a multi-step process. First, each interview transcript was read, noting any comments by the participant that appeared to address the study objectives. Similar comments were tagged with short descriptors (coding). Each code bound together similar sets of comments to identify different explanations as to how marital status may or may not influence the association between FSS and memory. Codes were derived inductively, without attempts to validate any preconceived theories surrounding the association between FSS, marital status, and memory (Braun & Clarke, 2006). Codes with similar underlying concepts were merged to produce overarching themes.

# Results

The 18 community-dwelling adult participants represented various marital status categories (married: 8; common-law: 2; divorced: 3; widowed: 2; single: 3). No participants were ultimately excluded based on any of the eligibility criteria. Most participants were recruited through an advertisement placed in Coffee News magazine (n = 14), followed by a public library (n = 2), or a referral from another participant (n = 2). The average age of participants was 65.6 ± 10.1 years (range: 46 to 84 years). Most participants (72.2%) were female, and nearly all had some form of post-secondary education. On average, participants rated their day-to-day memory as 8.2 out of 10 (range: 5.5 to 10), while their satisfaction with their current marital status received a rating of 8.7 out of 10 (range: 4 to 10) (Table 1).

**Table 1.** Study participants’ characteristics (n = 18)

|  |  |
| --- | --- |
|  | n (%) |
| **Age** (in years) |  |
| Mean (SD) | 65.6 (10.1) |
| **Sex** |  |
| Female | 13 (72.2) |
| Male | 5 (27.8) |
| **Marital status** |  |
| Married | 8 (44.4) |
| Common-law relationship | 2 (11.1) |
| Divorced | 3 (16.7) |
| Widowed | 2 (11.1) |
| Single | 3 (16.7) |
| **Education** |  |
| High school | 1 (5.6) |
| Post-secondary degree/diploma | 15 (83.3) |
| Graduate degree | 2 (11.1) |
| **Satisfaction with current marital status** (scale of 1 to 10) |  |
| Mean (SD) | 8.7 (1.7) |
| **Subjective memory rating** (scale of 1 to 10) |  |
| Mean (SD) | 8.2 (1.3) |

Abbreviations: SD: standard deviation

Overall, most participants thought FSS could be a positive influence on memory, but they did not consider marital status to be critical to this association. They provided three general and interconnected rationales to explain why marital status might not impact the association between FSS and memory: “*learning to cope*” — participants used other alternatives besides a spouse to deal with memory challenges; “*context matters*” — contextual factors such as marital satisfaction or the length of marriage can affect the degree of support available from a spouse; and “*doing more harm than good*” — spouses may provide too much support, reducing participants’ autonomy to stimulate their own cognitive processes. Each theme is discussed in greater detail in the following sections.

## 3.1 Learning to cope

*Learning to cope* was a major theme in several interviews. While many married or common-law participants expressed their appreciation for having a partner to rely on for support and memory challenges, they also explained that in the absence of a partner, they would learn to adapt to their circumstances by seeking other ways of coping with challenges. This sentiment was shared by nearly all the unmarried participants. The adaptive coping mechanisms described by participants could generally be grouped into two categories: 1) using alternative social connections to fill the gaps, and 2) incorporating tangible tools to overcome memory challenges.

### 3.1.1 Alternative social connections

Some participants said that in the absence of a spouse or common-law partner, they would turn to other social alternatives, such as family or friends, to fulfill their social support needs. For example, Nina, who did not get married until later in life, noted she did not observe any differences in her memory compared to when she was single, mainly due to her ability to leverage other social connections:

*“I didn't get married until I was like what? 40-something, right? So I have lived all of those lives by myself, and I don't feel like my memory was any worse. I relied more heavily on my social networks at the time. My friends, my parents, my family, like those kinds of things.” (Nina, 46, married)*

Similarly, Diana, who had previously been both married and in a common-law relationship, explained that without a partner, she relies on her family for support, which in turn helps her to remember things better:

*“My daughters are really on the ball, and they'll fill in some details. They're both bright and I marvel at how they remember details, but then I have to remember. I used to remember details a lot, and … either I don't think it's important or the brain just doesn't have that flexibility of learning … so it's like they make up those little deficiencies, and they add those little cues, that support.” (Diana, 64, single)*

When asked whether marriage has an impact on the relationship between social support and memory, Lucas disagreed, stating:

*“I enjoy being married but I know single people who are more than happy to be single. Like they enjoy being single, or they've learned to cope with this scenario. I know some widows and widowers who are in a great spot because they have a very good social network. I would say a good, sound social network is just as important as a marital social network. So a marital social network is just a variation of a platonic or family, or whatever friendship social network. It's just I think you're able to kind of find what you need with a different set of tools.” (Lucas, 58, married)*

In fact, some participants emphasized that while marital dissolution is not ideal, most individuals would adapt to these changing circumstances by going into survival mode. For instance, Carmen discussed how after her husband had passed, she got involved in the community and various philanthropic projects to stay connected:

*“You're alone, okay? What do you do? Like I'm alone here. I didn't go into a depression. I went into fight or flight. I thought, well, if I'm going to survive, there's so much I can do still. I’ve got to keep busy, right? So that's what I've done to help my memories.” (Carmen, 70, widowed)*

Likewise, Lucas noted that marriage is not the sole source of FSS, and it is essential for unmarried individuals to explore other social avenues when spousal support is unavailable:

*“I guess necessity is the motherhood of invention. So if you don't have that marital support, you find other avenues of tackling, you know, memory being the component. So you have other tools that you need to do like – hey, let's face it, in order to function in society and in life, you need to kind of find a way how to. You can't completely forget everything all the time, or it's a pretty tough life. So if you're not married, you will find other ways of approaching that memory. It's just that your social support network is different socially with friends and family than it is with marriage. You just find other options. Other ways of doing things. More than one way to skin a cat, right?” (Lucas, 58, married)*

Overall, it was evident that in the absence of a spouse (or sufficient spousal support), individuals can turn to alternative social networks, such as friends or family, to fulfill their support needs and access cognitive stimulation.

### 3.1.2 Other coping mechanisms

Besides relying on social connections to address memory challenges, many participants reported using various tangible tools to help jog their memory. Miriam explained that in the absence of a partner to remind people of appointments or tasks, unmarried individuals may have to take extra steps to compensate for memory issues. However, they can still manage effectively on their own by creating lists, setting phone alerts, utilizing task apps, or employing other reminder techniques:

*“If they're self-reliant, independent, then they can use any mechanism to make sure that they remember what they're supposed to. I mean, even putting post-it notes around the* *house like remember to do this, remember to go here. Simple ways to help them … The same with using a calendar or something to remind yourself. Using alarms or alerts on your cell phone to remind you of appointments and people's birthdays and anniversaries.” (Miriam, 67, married)*

However, these compensation strategies were not just limited to single individuals. A key point in several interviews was that, regardless of marital status, both married and unmarried participants employed similar compensation strategies to enhance their memory, emphasizing the importance of self-efficacy and recognizing that support from a spouse may not be the only source of memory reinforcement:

*“Well, people who are married have a support system, generally, because they have a caregiver who will bring them to things or sign them up for things. Being on your own, you just do what you have to do. I do make a list when I go grocery shopping, but then so do my friends who are married.” (Esther, 81, widowed)*

Likewise, Helen noted her marital status did not impact her memory; although she was single, she had an exceptional memory due to her ability to take advantage of the same support tools that her married peers also used:

*“In terms of memory, I guess, because whether you're single or you’re living with one or more people, we all use the same sort of … most of us use the same sort of memory aids. Like I just said, the devices, calendars, photographs, records of events, photographic records of events, they'll help you remember who was at different parties and things. You have them whether you're single or married.” (Helen, 79, single)*

Taken together, these findings support the notion that coping strategies may come in several different shapes and forms. Regardless of marital status, individuals tend to operate with greater efficacy when leveraging a comprehensive support environment that includes the use of social network members as well as other distinct practical tools, such as calendars, technological reminders, and lists to enhance memory performance.

## 3.2 Context matters

*Context matters* was another key theme discussed in every interview. Participants highlighted that while marital status alone may not directly influence the association between FSS and memory, contextual factors such as the length of the marriage, prior marital history, and satisfaction with the relationship were all crucial variables that could influence how individuals experience social support and manage their memory. Being in a supportive, fulfilling relationship may enhance memory by providing cognitive support, whereas unsatisfactory relationships, especially those with high stress or emotional distance, can have the opposite effect. More specifically, participants felt emotionally fulfilling relationships would foster cognitive resilience by promoting a sense of safety, reducing stress, and encouraging positive social interactions that stimulate neural pathways associated with memory and learning. A supportive spouse can also serve as a memory aid, providing reminders for important events, appointments and daily tasks, thereby further enhancing memory retention efforts.

### 3.2.1 Marital satisfaction

The role of marital satisfaction in the association between FSS, marital status, and memory is important. Several participants emphasized that the quality of their marital relationships influenced both their cognitive health and overall well-being. Interestingly, among the unmarried participants, many rated their overall satisfaction with their relationship status highly, often giving themselves a score of 9 or 10 on a scale of 1 to 10. In contrast, many married participants reported lower levels of satisfaction, with some rating their satisfaction as 8 or less.

Several participants, such as Diana, emphasized that marriages or common-law relationships may serve some benefit, but these advantages are not always directly linked to better well-being. Unmarried individuals are not uniformly disadvantaged and, in some cases, may be single by choice. Thus, an individual’s feelings about their relationship status should be considered:

*“I have a number of girlfriends that have been married, and they have zero interest in dating again or zero interest in cohabiting. They are very, very happy on their own. So I think the big thing is, in whatever relationship you're happy in, you sleep better, you eat better, you take care of yourself better, I suspect, and you do the things that make you happy.” (Diana, 64, single)*

When satisfaction is low, individuals may feel burdened by the responsibilities and stress of their relationships, which can subsequently lead to a decline in memory performance. This burden, especially in unsatisfactory or unequal relationships, can have adverse effects on cognitive function by diverting mental energy away from focusing on personal memory tasks, leading to frustration and forgetfulness. As illustrated by Alice, a low-quality relationship can weaken cognitive processes by not allowing individuals to focus their attention on remembering important tasks due to competing stressors: *“Well, if you're in a bad relationship, marriage or not, you're dealing with stress, so you'll focus on the stress versus other appointments that you have.” (Alice, 58, divorced)*

In addition, many participants noted that being in a low-quality relationship often prompted them to seek support from other social network members to fill the gap from their partner, further highlighting the previous theme of learning to cope by using social alternatives. For example, Lucas’s reflections highlighted the emotional weight of an unsatisfactory relationship, noting that even when married, one should feel supported and connected:

*“So let's say someone is in an unsatisfactory marriage and, whether it's emotional, mental, or physical strife, I don't know, but let's say they're not in a scenario where they're happy with their marriage. I think people will tend to find a different social network to fill the void that they're getting from their marital social network. So, as an example, a couple is not getting along well. They don't socialize very well. Typically, I would say the majority of people will find either a family member or an outside friend, or whatever, to discuss certain aspects of their life that they normally would have spoken about with their partner, but that's not there, so they find a different outlet to kind of discuss that. So as much as it's great to be married, I don't think it's a have-in and be-all, for memory at least.” (Lucas, 58, married)*

Moreover, participants with more complex marital histories or transitions — whether through divorce, remarriage, or tumultuous long-term relationships — offered unique perspectives on how their experiences influenced their memory. Many participants found that being alone, particularly when their relationships were unsatisfactory, provided them with a greater sense of happiness and fulfillment than their marriages. Therefore, they did not necessarily associate their divorce or separation with a sense of loss. In fact, being alone allowed them to concentrate on their own needs, creating a mental space where they could focus on remembering things for themselves without worrying about a partner’s needs. This reduction in stress helped them feel more in control of their memories. For example, Paula shared how being single allowed her to be solely responsible for herself and her own memory management:

*“I find it much easier to keep track of everything for me than to keep track of everything for me and somebody else. And what happens is it's an extra burden, but it's an emotionally taxing burden, and it involves resentment and anger and frustration and becomes a burden. More of a burden, more unpleasant. But do I function any less? Is my memory any worse? I feel that it's high performing whether I'm with somebody or not with somebody, but it's more annoying to have to be high performing for somebody else and so I feel much better. I feel better about my memory when I only have to remember for myself.” (Paula, 62, divorced)*

Thus, while marriage can offer support, not all marriages should be treated equally. Some marriages may be unfulfilling and the emotional labour of remembering for someone else, as well as the added pressure of an unhappy relationship, can interfere with cognitive function by increasing stress and decreasing the mental energy available for memory tasks.

### 3.2.2 Marital history

The length of a marriage or partnership may also play a critical role in the association between FSS, marital status, and memory. Long-term marriages may offer stability, but they can also present challenges that affect memory. On one hand, participants suggested that the familiarity and continuity offered by a long-term marriage may support their memory retention. Peter, reflecting on his marriage, acknowledged the benefits of shared experiences and the comfort of a long-term partner, noting that having the same partner for many years helped with his memory:

*“We talk about stories from when we got married, and stories before we got married. Certainly, she has her own childhood stories, and I have my own childhood stories … we always talk about those things so that certainly helps remember things of the past. So, in terms of long-term memory, certainly talking about such things helps greatly … I mean, if I was married to three or four women, one after the other, probably I wouldn't remember even a single thing that happened … While I’m talking to you, I realize that probably helps, being married to the same person.” (Peter, 70, married).*

On the other hand, a longer duration of marriage is not always beneficial. As reiterated by many participants, a longer marriage does not necessarily imply greater “togetherness”. Over time, both physical separation and emotional distance can make a long marriage feel less supportive, possibly diminishing its positive impact on cognitive support. For example, Carmen explained how her relationship dynamics changed drastically as her husband started working away for extended periods, ultimately altering the intimacy of their 40-year marriage:

*“Well, he wasn't perfect. After 40 years, I can say that. I wasn't perfect, he wasn't perfect, and at the end, the last I'd say 7 or 8 years before he passed in 2016, we were basically just friends because he worked in Fort McMurray, Alberta. So he flew in and flew out every two weeks … It changed the whole dynamic of our relationship. So it was tough. It was very tough, but I think it was a precursor. I think God was getting me ready to be on my own.” (Carmen, 70, widowed).*

These nuances suggest the role of marital status in cognitive health is not straightforward, but rather deeply affected by broader relational contexts. Factors such as physical separation, emotional closeness, communication patterns, and marital history all play crucial roles in shaping how relationships influence cognitive function.

## 3.3 Doing more harm than good

Another key theme in the interviews was the potential downside of excessive support from spouses, which may inadvertently *do more harm than good* by limiting an individual's cognitive autonomy and ability to engage in mental stimulation. Some participants expressed that when one partner consistently handles tasks or decision-making, the other may become less inclined to exercise their own cognitive abilities, potentially accelerating cognitive decline. As one participant reflected about his partner:

*“I know she's there as a support that way, but I don't want to rely on that too much because I suspect that's one of the things with my father that made his dementia worse. My mother did that for him. She passed away many years ago, and we noticed the dementia getting worse then, but she covered for him. You probably run across that before dementia too, a spouse covers for the other without realizing they're covering. They're just helping. But we didn't realize how bad his dementia was while she was there … he tagged along beautifully but I think he was forgetting these things, and he just didn't say I forgot. He just went with her. My mother just made sure it happened. Food would show up. They would do what they needed to. She ran that, and I think that really too much support can add to the dementia because you're not letting the person exercise their own memory over time.” (Gavin, 66, common-law)*

One participant argued that, as a single person, she has had to consistently think on her feet and find alternative strategies to remember things. In fact, this constant engagement may better stimulate her mental processes compared to couples who are co-dependent on each other for support and who might struggle to cope independently:

*“Especially when my husband left … it's like nobody's coming to rescue you. You just need to do this. So buckle down, figure it out and do it. Just do it. So there does come from that a sense of power and self-determination … I looked back and went, wow! You handled that really well. Like I didn't take grief leave, I just had to battle on through … Put it this way, your brain just has to stay that much stronger. I think you have to push yourself and challenge yourself more when you're on your own. Like I find my mom relies a lot on my dad.” (Diana, 64, single)*

These concerns highlight that, while marital support can be beneficial, a delicate balance exists between providing support and fostering independence. If this balance is disrupted, then unintended consequences may occur for cognitive health. As suggested by Gavin, over-support may limit mental exercise and, consequently, affect memory functioning in the long run:

*“I seriously wonder about that, all the assistance my mother gave to my father, if that really added to it … you know, the brain is, if you don't exercise it, attributes do fade … And my dad never had to use his memory because my mother always did it for him, so I think that might be something to look at – the fact that if you have someone that does too much for a spouse, they could be harming them.” (Gavin, 66, common-law)*

Taken together, although spousal support can serve many benefits for cognitive health, it should be provided in moderation. Excessive support can be detrimental to memory, as participants noted that too much assistance may reduce individuals’ cognitive autonomy, not allowing them to sufficiently stimulate their mental processes.

# Discussion and implications

Generally, participants agreed that while high-quality FSS may positively impact memory performance, these benefits may not be affected by marital status. The views of participants echoed previous quantitative research in Canada (Haghighi et al., 2025; Yoo et al., 2023) and other regions (Ge et al., 2017; Gow et al., 2013; Krueger et al., 2009). Indeed, several quantitative studies found mostly positive, though statistically non-significant, associations between FSS from a spouse/partner and memory (Scholes & Liao, 2022; Windsor et al., 2014; Zahodne et al., 2019). However, none of the quantitative studies specifically explored whether marital status modified the association between FSS and memory. Instead, these studies examined whether spousal support, in comparison to support from other sources such as children or friends, differentially impacted memory, suggesting that the question of marital status as an effect modifier remains unanswered. Moreover, none of these studies examined contextual marital factors (e.g., marital satisfaction or the length of marriage) alongside FSS and memory.

Our novel, qualitative findings generated three key themes to explain why marital status may not impact the association between FSS and memory performance: (1) learning to cope in the absence of a spouse, (2) the importance of considering contextual factors, and (3) the potential for excessive support from spouses that may hinder participants’ ability to stimulate their own cognitive processes (see Figure 1 for a visual representation of these themes).

## 4.1 Learning to cope

The findings support the notion that, regardless of marital status, individuals tend to operate with greater mental capacity when leveraging a comprehensive, supportive environment that includes the use of social network members and practical tools like calendars, phone reminders, or written lists to enhance their memory performance. Conceptualizing individuals' memory function within an ecological framework that incorporates both social and material support systems may have important implications for understanding the everyday competencies of middle-aged and older adults (Harris et al., 2022). Previous research has found that practical tools are the most frequently reported memory compensation resources used by older adults and reliance on one’s spouse is the least reported source of compensation, even among couples in long-term marital relationships (Harris et al., 2022). The use of external memory compensation tools has been consistently linked with better cognitive function, specifically memory, in older adults (Burack & Lachman, 1996; Tomaszewski Farias et al., 2018). As suggested by many of our participants, individuals may leverage such resources to improve or maintain their cognitive functioning, regardless of their marital situation, potentially explaining the absence of a moderating effect for marital status in the association between FSS and memory.

Additionally, unmarried individuals who cannot derive FSS from a spouse may compensate for the absence of a spouse by actively restructuring their support networks to ensure they have sufficient FSS available to them from other close-knit network members. For example, single individuals report receiving more emotional support than married or cohabitating individuals, and are more likely to interact with, provide help to, and receive help from parents, siblings, children, extended family, neighbours and friends (Penning & Wu, 2014). These findings were echoed by several of our participants, who expressed that many members of their social network rely more on friends for support rather than their spouses. Therefore, although marriage is one source of support, close-knit relationships with other members of one’s social circle may also generate support. These findings align with theories such as the stress-buffering hypothesis and use-it-or-lose-it theory. The stress buffering hypothesis posits that having access to steady sources of FSS (whether from friends, family, or other close relationships) can offer valuable coping resources, thereby mitigating the adverse effects of stress on cognitive health outcomes (Cohen & Wills, 1985). On the other hand, the use-it-or-lose-it theory suggests that regular social interaction with these sources of support (whether marital or otherwise) can provide cognitive stimulation, strengthening mental processes like memory and promoting more efficient use of neural networks (Hultsch et al., 1999).

## 4.2 Context matters

Many qualitative interviewees highlighted the complicated nature of ‘marital status’. More specifically, they shared detailed accounts of their marital histories, noting various transitions between marital status categories over time (e.g., from married to divorced). Their collective marital histories provided them with a unique perspective on the topic, allowing them to compare their experiences of social support and memory at various points in their lives. Marital relationships can be complex and dynamic, following intricate trajectories such as divorce and remarriage, or separation and reconciliation. Notably, several participants described how changes in their marital status directly influenced the support they received and their experiences with memory, suggesting a more nuanced interplay that cannot be captured by simplistic measures of marital status such as “*What is your current marital/partner status?*”. These ‘surface-level’ data about participants’ marital status help compile demographic profiles of study participants but are unlikely to yield substantive information about the relationship between FSS, marital status and memory because they lack the depth necessary to truly encapsulate the cumulative and evolving nature of marital experiences over time.

Participants expressed varying levels of satisfaction with their marital status, which may help explain differences in cognitive health outcomes, particularly in relation to memory. More specifically, some married participants were unhappy in their relationships, whereas some single individuals reported they were highly satisfied with not having a partner. These findings further support previous research stating that unmarried people are not uniformly disadvantaged and, in some cases, may have better health outcomes than those who are unhappily married (Holt-Lunstad et al., 2008). In fact, some scholars argue that satisfaction with one’s marital status is more salient for health than marital status itself (Umberson et al., 2006). Indeed, marital satisfaction has been linked to both social support (Brock & Lawrence, 2009) and memory (Lindert et al., 2022; Waldinger et al., 2015). Thus, it is possible that marital status may impact the association between FSS and memory differently for individuals who are satisfied versus dissatisfied with their current relationship status. Consequently, to prevent these nuanced differences from being overlooked, a key direction for future research is to collect data on marital satisfaction when examining marital-related variables as major components of one’s research. Unfortunately, many quantitative studies exploring the health impacts of marital status do not measure key variables such as marital satisfaction or the length of marriage. Therefore, qualitative methodologies, especially those that emphasize the importance of lived experience, can illuminate parts of marital relationships that are not captured in quantitative research.

## 4.3 Doing more harm than good

The findings suggest that while marital status may not moderate the relationship between FSS and memory, the amount of support received from spouses can play a critical role in cognitive outcomes. One key qualitative theme was that excessive FSS from a spouse may not always be beneficial and, in some cases, can hinder cognitive functioning. Previous research has suggested that the relationship between social support and cognitive health may be non-linear (Zahodne et al., 2019). Indeed, past a certain threshold, high levels of FSS can potentially undermine self-efficacy and foster dependency (Baltes & Wahl, 1992, 1996), both of which may lead to increased stress and, in turn, negatively impact memory performance. In addition, when a spouse provides excessive assistance — whether by anticipating needs too frequently or taking on tasks the other partner might prefer to handle independently — this may limit the individual's opportunity to exercise their own cognitive processes. In line with the use-it-or-lose-it theory (Hultsch et al., 1999), this lack of cognitive stimulation could lead to less efficient use of neural networks, potentially contributing to declines in memory function over time. Overprovision of support can also introduce additional stressors into a relationship (Brock & Lawrence, 2009), contributing to greater declines in marital satisfaction, which has been shown to negatively affect cognitive function (Haghighi et al., 2024; J. Kim & Kwon, 2023; Y. Kim, 2021). Therefore, excessive support can directly impact cognitive function by hindering mental engagement and indirectly impact cognition by reducing marital quality through heightened conflict, stress, or lack of autonomy. Taken together, these findings suggest the relationship between FSS, marital status and cognitive outcomes, particularly memory, is far more complex than the simple presence or absence of support. The current study underscores the importance of understanding that individuals have unique support needs. More frequent support is not always preferable and may sometimes create a dynamic where well-intentioned support from a spouse could have unintended, adverse consequences for cognition.

## 4.4 Strengths and limitations

With the current aging population in Canada, it is important to investigate potentially modifiable factors to promote healthy cognitive function. The current study addresses several gaps in the literature, helping to develop a better understanding of how marital relationships affect the association between FSS and memory. As previously discussed, little research has focused on marital-related variables, FSS and memory simultaneously. To our knowledge, the current study is the first to examine the relationships between FSS, marital-related variables, and memory using qualitative methodology. Previous qualitative research has investigated the marital experiences of spousal caregivers of individuals with memory loss disorders, such as dementia (Hammar et al., 2021; Van Hout et al., 2025), but no studies specifically explored the questions raised in this study. This highlights a critical gap in the literature — to explore how social and marital relationships influence memory in middle-aged and older adults without existing neurocognitive disorders — a gap that this study addresses.

Another key strength of this study is the inclusion of both middle-aged and older adults, providing a broader perspective that is often overlooked in studies focusing on single age groups. Furthermore, by interviewing individuals with a diverse range of marital statuses, including those in common-law relationships (who are frequently underrepresented in marital research), we were able to capture a wide range of perspectives, enhancing the applicability of the findings. However, the experiences of the qualitative participants may not represent individuals from different geographical regions or age groups. Additionally, our sample primarily consisted of heterosexual participants. Future research should explore the experiences of non-heterosexual couples in this context.

In addition, participants were recruited through posters, advertisements, and snowball sampling, which may have attracted individuals who were healthier, more engaged, and more willing to participate in research. Also, those who were more open to discussing their marriages or marital histories may have been more likely to self-select, potentially influencing the nature of the data collected.

A single coder was used in the qualitative analysis. While some researchers argue that multiple coders can increase the reliability of the coding process (O’Connor & Joffe, 2020), reflexive thematic analysis (the method used in this study) values researcher subjectivity and views the coding process as inherently idiosyncratic, thereby contrasting with the quantitative objective of requiring multiple ‘coders’ to reach consensus in efforts such as citation screening in systematic reviews (Braun & Clarke, 2023).

# Conclusions

As social networks diminish in size in later life and intimate partnerships become more central, the findings of the current study highlight that fostering strong social connections could be effective for promoting cognitive health in middle-aged and older adults. The present study contributes to the growing body of research that can help inform public health strategies targeting social connection, including initiatives such as the World Health Organization’s Commission on Social Connection (2025). The commission views social connection as a multifaceted construct, extending beyond structural indicators to include the quality, functionality, and diversity of social relationships. Our findings underscore this point, supporting the Commission’s recommendation for policy and interventions that prioritize enhancing diverse and meaningful social connections, such as social prescribing or peer-support groups, as a means of addressing the cognitive and emotional needs of the aging population (World Health Organization, 2021).

Our findings highlight the importance of not only considering the presence of social support, but also evaluating its appropriateness and balance. As previously mentioned, overprovision of FSS may inadvertently limit opportunities for individuals to engage in cognitive stimulation, which can undermine their self-efficacy and promote dependence. This underscores a crucial implication for future interventions to focus on fostering diverse and resilient support networks that extend beyond a single individual, while also providing spouses with guidance on how to offer support in ways that maintain autonomy and encourage cognitive engagement. Enhancing access to FSS from a broader range of social network members may help prevent overreliance on a single partner, leading to more even and sustainable distribution of care. Health professionals and public health messaging could encourage simple, autonomy-respecting approaches to care (e.g., encouraging a partner to start journaling to track recent events, engage in social activities, or pursue personal hobbies) to help partners understand the delicate balance between being helpful and providing too much assistance.

**Funding**

This work was supported by the Canadian Institutes of Health Research (CIHR) [grant number AC9-187266].

**CRediT authorship contribution statement**

**Paniz Haghighi:** Conceptualization, Methodology, Data curation, Formal analysis, Investigation, Resources, Visualization, Writing – original draft; **Samantha Meyer:** Methodology, Validation, Writing – review & editing; **Suzanne Tyas & Leilei Zeng:** Validation, Writing – review & editing; **Mark Oremus:** Conceptualization, Funding acquisition, Methodology, Visualization, Validation, Project administration, Supervision, Writing – review & editing.

**Declaration of competing interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

**Data availability:** In accordance with the requirements of our research ethics board, study data cannot be readily shared. However, interested researchers may reach out to the authors to discuss data sharing agreements.

# References

Aartsen, M. J., Van Tilburg, T., Smits, C. H. M., Comijs, H. C., & Knipscheer, K. C. P. M. (2005). Does widowhood affect memory performance of older persons? *Psychological Medicine*, *35*(2), 217–226. https://doi.org/10.1017/S0033291704002831

Baltes, M. M., & Wahl, H.-W. (1992). The dependency-support script in institutions: Generalization to community settings. *Psychology and Aging*, *7*(3), 409–418. https://doi.org/10.1037/0882-7974.7.3.409

Baltes, M. M., & Wahl, H.-W. (1996). Patterns of communication in old age: The dependence-support and independence-ignore script. *Health Communication*, *8*(3), 217–231. https://doi.org/10.1207/s15327027hc0803\_3

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, *11*(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2023). Toward good practice in thematic analysis: Avoiding common problems and be(com)ing a knowing researcher. *International Journal of Transgender Health*, *24*(1), 1–6. https://doi.org/10.1080/26895269.2022.2129597

Brock, R. L., & Lawrence, E. (2009). Too much of a good thing: Underprovision versus overprovision of partner support. *Journal of Family Psychology*, *23*(2), 181–192. https://doi.org/10.1037/a0015402

Burack, O. R., & Lachman, M. E. (1996). The effects of list-making on recall in young and elderly adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *51B*(4), P226–P233. https://doi.org/10.1093/geronb/51B.4.P226

Coffee News. (2025). *Coffee News Canada*. https://www.coffeenewscanada.com/

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310–357. https://doi.org/10.1037/0033-2909.98.2.310

Craik, F. I. M., & Rose, N. S. (2012). Memory encoding and aging: A neurocognitive perspective. *Neuroscience and Biobehavioral Reviews*, *36*(7), 1729–1739. https://doi.org/10.1016/j.neubiorev.2011.11.007

Ge, S., Wu, B., Bailey, D. E., & Dong, X. (2017). Social support, social strain, and cognitive function among community-dwelling U.S. Chinese older adults. *The Journals of Gerontology: Series A*, *72*(suppl\_1), S16–S21. https://doi.org/10.1093/gerona/glw221

Gow, A. J., Corley, J., Starr, J. M., & Deary, I. J. (2013). Which social network or support factors are associated with cognitive abilities in old age? *Gerontology*, *59*(5), 454–463. https://doi.org/10.1159/000351265

Grundström, J., Konttinen, H., Berg, N., & Kiviruusu, O. (2021). Associations between relationship status and mental well-being in different life phases from young to middle adulthood. *SSM - Population Health*, *14*, 100774. https://doi.org/10.1016/j.ssmph.2021.100774

Haghighi, P., Littler, E. A. L., Mauer-Vakil, D., Miller, M., & Oremus, M. (2024). Exploring the relationship between marital quality and cognitive function: A systematic review. *Social Science & Medicine*, *355*, 117120. https://doi.org/10.1016/j.socscimed.2024.117120

Haghighi, P., & Oremus, M. (2023). Examining the association between functional social support, marital status, and memory: A systematic review. *BMC Geriatrics*, *23*(1), 290. https://doi.org/10.1186/s12877-023-03982-3

Haghighi, P., Zeng, L., Tyas, S. L., Meyer, S. B., & Oremus, M. (2025). The association between functional social support, marital status and memory in middle-aged and older adults: An analysis of the Canadian Longitudinal Study on Aging. *Archives of Gerontology and Geriatrics*, *131*, 105770. https://doi.org/10.1016/j.archger.2025.105770

Hammar, L. M., Williams, C. L., Meranius, M. S., & McKee, K. (2021). Being ‘alone’ striving for belonging and adaption in a new reality - The experiences of spouse carers of persons with dementia. *Dementia (London)*, *20*(1), 273–290. https://doi.org/10.1177/1471301219879343

Harris, C. B., Sutton, J., Keil, P. G., McIlwain, N., Harris, S. A., Barnier, A. J., Savage, G., & Dixon, R. A. (2022). Ageing together: Interdependence in the memory compensation strategies of long-married older couples. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.854051

Holt-Lunstad, J., Birmingham, W., & Jones, B. Q. (2008). Is there something unique about marriage? The relative impact of marital status, relationship quality, and network social support on ambulatory blood pressure and mental health. *Annals of Behavioral Medicine*, *35*(2), 239–244. https://doi.org/10.1007/s12160-008-9018-y

Hultsch, D. F., Hertzog, C., Small, B. J., & Dixon, R. A. (1999). Use it or lose It: Engaged lifestyle as a buffer of cognitive decline in aging? *Psychology and Aging*, *14*(2), 245–263.

Hülür, G. (2022). Structural and functional aspects of social relationships and episodic memory: Between-person and within-person associations in middle-aged and older adults. *Gerontology*, *68*(1), 86–97. https://doi.org/10.1159/000514949

Kim, J., & Kwon, K. Y. (2023). Investigating heterogeneity in the relationship between marital satisfaction and cognitive health by gender and across the cognitive function distribution. *Innovation in Aging*, *7*(7). https://doi.org/10.1093/geroni/igad079

Kim, Y. (2021). Gender differences in the link between marital quality and cognitive decline among older adults in Korea. *Psychiatry Investigation*, *18*(11), 1091–1099. https://doi.org/10.30773/pi.2021.0131

Krueger, K. R., Wilson, R. S., Kamenetsky, J. M., Barnes, L. L., Bienias, J. L., & Bennett, D. A. (2009). Social engagement and cognitive function in old age. *Experimental Aging Research*, *35*(1), 45–60. https://doi.org/10.1080/03610730802545028

Kuiper, J. S., Zuidersma, M., Zuidema, S. U., Burgerhof, J. G. M., Stolk, R. P., Oude Voshaar, R. C., & Smidt, N. (2016). Social relationships and cognitive decline: A systematic review and meta-analysis of longitudinal cohort studies. *International Journal of Epidemiology*, *45*(4), 1169–1206. https://doi.org/10.1093/ije/dyw089

Liao, J., & Scholes, S. (2017). Association of social support and cognitive aging modified by sex and relationship type: A prospective investigation in the English Longitudinal Study of Ageing. *American Journal of Epidemiology*, *186*(7), 787–795. https://doi.org/10.1093/aje/kwx142

Lindert, J., Paul, K. C., Lachman, M. E., Ritz, B., & Seeman, T. (2022). Social stress and risk of declining cognition: A longitudinal study of men and women in the United States. *Social Psychiatry and Psychiatric Epidemiology*, *57*(9), 1875–1884. https://doi.org/10.1007/s00127-021-02089-7

Liu, H., Zhang, Y., Burgard, S. A., & Needham, B. L. (2019). Marital status and cognitive impairment in the United States: Evidence from the National Health and Aging Trends Study. *Annals of Epidemiology*, *38*, 28-34.e2. https://doi.org/10.1016/j.annepidem.2019.08.007

Mousavi-Nasab, S. M. H., Kormi-Nouri, R., Sundström, A., & Nilsson, L. G. (2012). The effects of marital status on episodic and semantic memory in healthy middle-aged and old individuals. *Scandinavian Journal of Psychology*, *53*(1), 1–8. https://doi.org/10.1111/j.1467-9450.2011.00926.x

O’Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: Debates and practical guidelines. *International Journal of Qualitative Methods*, *19*. https://doi.org/10.1177/1609406919899220

Penning, M. J., & Wu, Z. (2014). Marital status, childlessness, and social support among older Canadians. *Canadian Journal on Aging*, *33*(4), 426–447. https://doi.org/10.1017/S0714980814000385

Raina, P., Wolfson, C., Kirkland, S., Griffith, L. E., Balion, C., Cossette, B., Dionne, I., Hofer, S., Hogan, D., van den Heuvel, E. R., Liu-Ambrose, T., Menec, V., Mugford, G., Patterson, C., Payette, H., Richards, B., Shannon, H., Sheets, D., Taler, V., … Young, L. (2019). Cohort profile: The Canadian Longitudinal Study on Aging (CLSA). *International Journal of Epidemiology*, *48*(6), 1752–1753j. https://doi.org/10.1093/ije/dyz173

Robles, T. F. (2014). Marital quality and health: Implications for marriage in the 21st century. *Current Directions in Psychological Science*, *23*, 427–432. https://doi.org/10.1177/0963721414549043

Sachdev, P. S., Blacker, D., Blazer, D. G., Ganguli, M., Jeste, D. V., Paulsen, J. S., & Petersen, R. C. (2014). Classifying neurocognitive disorders: The DSM-5 approach. *Nature Reviews Neurology*, *10*(11), 634–642. https://doi.org/10.1038/nrneurol.2014.181

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., & Jinks, C. (2018). Saturation in qualitative research: Exploring its conceptualization and operationalization. *Quality & Quantity*, *52*(4), 1893–1907. https://doi.org/10.1007/s11135-017-0574-8

Scholes, S., & Liao, J. (2022). Social support, social strain and declines in verbal memory: Sex-specific associations based on 16-year follow-up of the English Longitudinal Study of Ageing cohort. *Aging & Mental Health*, 1–9. https://doi.org/10.1080/13607863.2022.2089628

Shapiro, A., & Keyes, C. L. M. (2008). Marital status and social well-being: Are the married always better off? *Social Indicators Research*, *88*(2), 329–346. https://doi.org/10.1007/s11205-007-9194-3

Tomaszewski Farias, S., Schmitter-Edgecombe, M., Weakley, A., Harvey, D., Denny, K. G., Barba, C., Gravano, J. T., Giovannetti, T., & Willis, S. (2018). Compensation strategies in older adults: Association with cognition and everyday function. *American Journal of Alzheimer’s Disease & Other Dementias*, *33*(3), 184–191. https://doi.org/10.1177/1533317517753361

Tuokko, H., Griffith, L. E., Simard, M., & Taler, V. (2017). Cognitive measures in the Canadian Longitudinal Study on Aging. *The Clinical Neuropsychologist*, *31*(1), 233–250. https://doi.org/10.1080/13854046.2016.1254279

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior*, *47*(1), 1–16. https://doi.org/10.1177/002214650604700101

Van Hout, E., Contreras, M., Mioshi, E., & Kishita, N. (2025). Understanding the impact of dementia on spousal relationships: A qualitative study with female spousal carers of people living with dementia. *Dementia (London)*, *24*(1), 23–39. https://doi.org/10.1177/14713012241286559

Waldinger, R. J., Cohen, S., Schulz, M. S., & Crowell, J. A. (2015). Security of attachment to spouses in late life. *Clinical Psychological Science*, *3*(4), 516–529. https://doi.org/10.1177/2167702614541261

Windsor, T. D., Gerstorf, D., Pearson, E., Ryan, L. H., & Anstey, K. J. (2014). Positive and negative social exchanges and cognitive aging in young-old adults: Differential associations across family, friend, and spouse domains. *Psychology and Aging*, *29*(1), 28–43. https://doi.org/10.1037/a0035256

World Health Organization. (2021). *Social isolation and loneliness among older people: Advocacy brief*. World Health Organization.

World Health Organization. (2025). *WHO Commission on Social Connection*. https://www.who.int/groups/commission-on-social-connection

Wyke, S., & Ford, G. (1992). Competing explanations for associations between marital status and health. *Social Science & Medicine*, *34*(5), 523–532. https://doi.org/10.1016/0277-9536(92)90208-8

Yoo, S. S., Tyas, S. L., Maxwell, C. J., & Oremus, M. (2023). The association between functional social support and memory in middle-aged and older adults: A prospective analysis of the Canadian Longitudinal Study on Aging’s Comprehensive Cohort. *Archives of Gerontology and Geriatrics*, *114*, 105076. https://doi.org/10.1016/j.archger.2023.105076

Zahodne, L. B., Ajrouch, K. J., Sharifian, N., & Antonucci, T. C. (2019). Social relations and age-related change in memory. *Psychology and Aging*, *34*(6), 751–765. https://doi.org/10.1037/pag0000369